

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A lithographic apparatus comprising:
a radiation system to provide a projection beam of radiation;
a support structure to support a patterning device, the patterning device constructed and arranged to pattern the projection beam according to a desired pattern;
a substrate table to hold a substrate; and
a projection system to project the patterned beam onto a target portion of the substrate[[:]].
said radiation system further comprising:
a beam delivery system comprising redirecting elements to redirect said beam along a beam path that extends from a radiation source to an illumination system, wherein said radiation source is arranged to provide a beam having a predetermined polarization state and said redirecting elements are arranged to provide a minimum polarization related radiation loss, and
wherein said beam delivery system is constructed and arranged to maintain the predetermined polarization state relative to each of said redirecting elements, said redirecting elements disposed along said beam path such that a plane of incidence of at least one of said redirecting elements intersects a plane of incidence of at least another one of said redirecting elements.
2. (Original) A lithographic apparatus according to claim 1, wherein said redirecting elements are dielectric mirror elements and said beam is arranged to have an s-polarisation state relative to each of said mirror elements.
3. (Original) A lithographic apparatus according to claim 1, wherein said beam delivery system comprises at least one polarizing plate to modify a polarization state of said radiation beam.
4. (Original) A lithographic apparatus according to claim 3, wherein said polarizing plate is a half lambda plate.

5. (Currently Amended) A lithographic apparatus according to claim 3, wherein said polarizing plate is ~~integral~~ in contact with one of said redirecting elements.

6. (Previously Presented) A lithographic apparatus according to claim 5, wherein said polarizing plate is bonded to one of said redirecting elements.

7.– 9. (Cancelled)

10. (Currently Amended) A device manufacturing method comprising:
~~producing a beam of radiation having a predetermined polarization state;~~
directing ~~the a~~ a beam of radiation having a predetermined polarization state
along a beam path through a plurality of redirecting elements to an illumination system, the directing being performed such that polarization-related radiation losses are reduced and such that the predetermined polarization state relative to each of said redirecting elements is maintained, said redirecting elements disposed along the beam path such that a plane of incidence of at least one of said redirecting elements intersects a plane of incidence of at least another one of said redirecting elements;
patterning the beam of radiation according to a desired pattern; and
projecting the patterned beam of radiation onto at least a portion of a radiation sensitive layer on a substrate.

11. (Original) A method according to claim 10, the method further comprising arranging said beam to have an s-polarisation state relative to redirecting elements used in the directing.

12. (Original) A method according to claim 10, wherein the beam of radiation which is directed to the illumination system has a substantially square cross-section.

13. – 16. (Cancelled).

17. (Currently Amended) A ~~method of manufacturing a lithographic apparatus employing radiation of a predetermined polarization state;~~ method comprising:

arranging a radiation system to provide a beam of radiation with said a predetermined polarization state, the radiation system including dielectric mirror elements to redirect the beam from a radiation source and at least one polarizer arranged between at least two of said dielectric mirror elements to modify said radiation to an s-polarization state relative to the dielectric mirror elements, said dielectric mirror elements disposed such that a plane of incidence of at least one of said dielectric mirror elements intersects a plane of incidence of at least another one of said dielectric mirror elements.

18. (Original) A method according to claim 17, wherein the radiation system is constructed and arranged to produce the beam of radiation such that it has a substantially square cross-section.

19. (Currently Amended) A method according to claim 17, wherein the radiation system and mirror elements are mutually arranged such that the beam, when provided, has a substantially s-polarization state relative to at least one of the ~~redirecting~~ mirror elements.

20. (Currently Amended) A method according to claim 19, wherein the beam, when provided, has a substantially s-polarization state relative to each of the ~~redirecting~~ mirror elements.

21. (New) A lithographic apparatus according to claim 1, wherein the beam delivery system includes an optical element that is arranged along said beam path between said at least one of said redirecting elements and said at least another one of said redirecting elements, said optical element configured to change an orientation of said predetermined polarization state.

22. (New) A lithographic apparatus according to claim 21, wherein said optical element is configured to position said predetermined polarization state in a plane that is substantially perpendicular to the plane of incidence of said at least another one of said redirecting elements.

23. (New) A lithographic apparatus according to claim 22, wherein said optical element is configured to rotate said predetermined polarization state by about 90°.

24. (New) A method according to claim 10, further comprising changing an orientation of said predetermined polarization state between said at least one of said redirecting elements and said at least another one of said redirecting elements.

25. (New) A method according to claim 24, wherein changing includes positioning said predetermined polarization state in a plane that is substantially perpendicular to the plane of incidence of said at least another one of said redirecting elements.

26. (New) A method according to claim 25, wherein the positioning includes rotating said predetermined polarization state by about 90°.